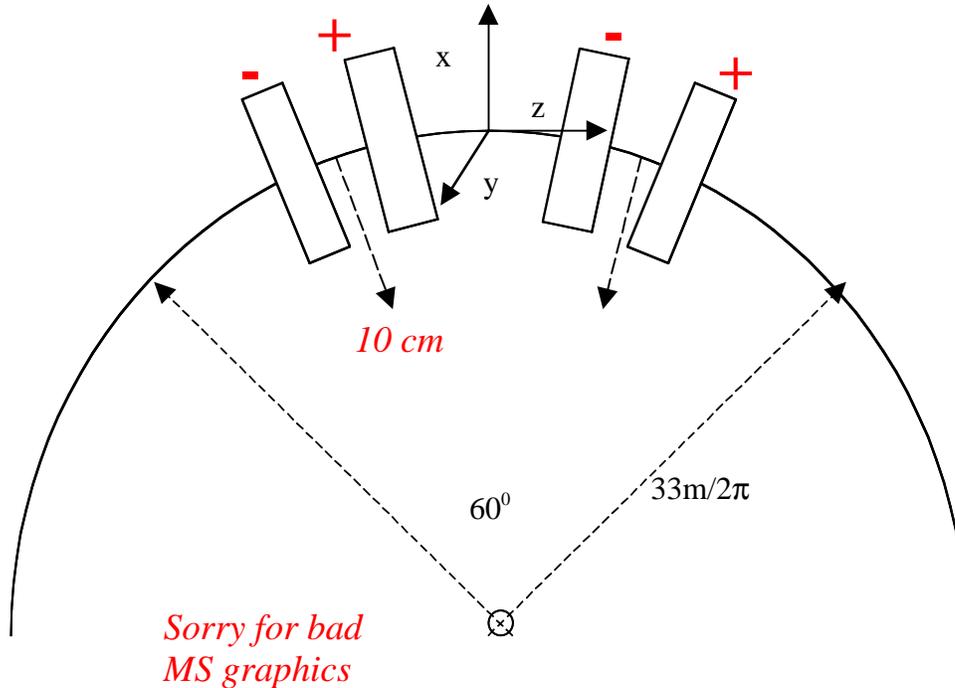


GEANT SIMULATION – BFIELDS

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- Following Mucool Note 239.
- Strategy - to generate field map in 60° range with symmetries about z=0
- Using 4 x 500turn solenoids positioned on central axis.
- Opposing dip angle ~ +/-2° to generat By field.
- First verify numerical integration and geometry. Figure 1
- Large RFOFO Bx field encountered! Figure 2
- Bob suggests translating pairs of opposing solenoids inward by ~10cm should help.

SINGLE COIL vZ(m)

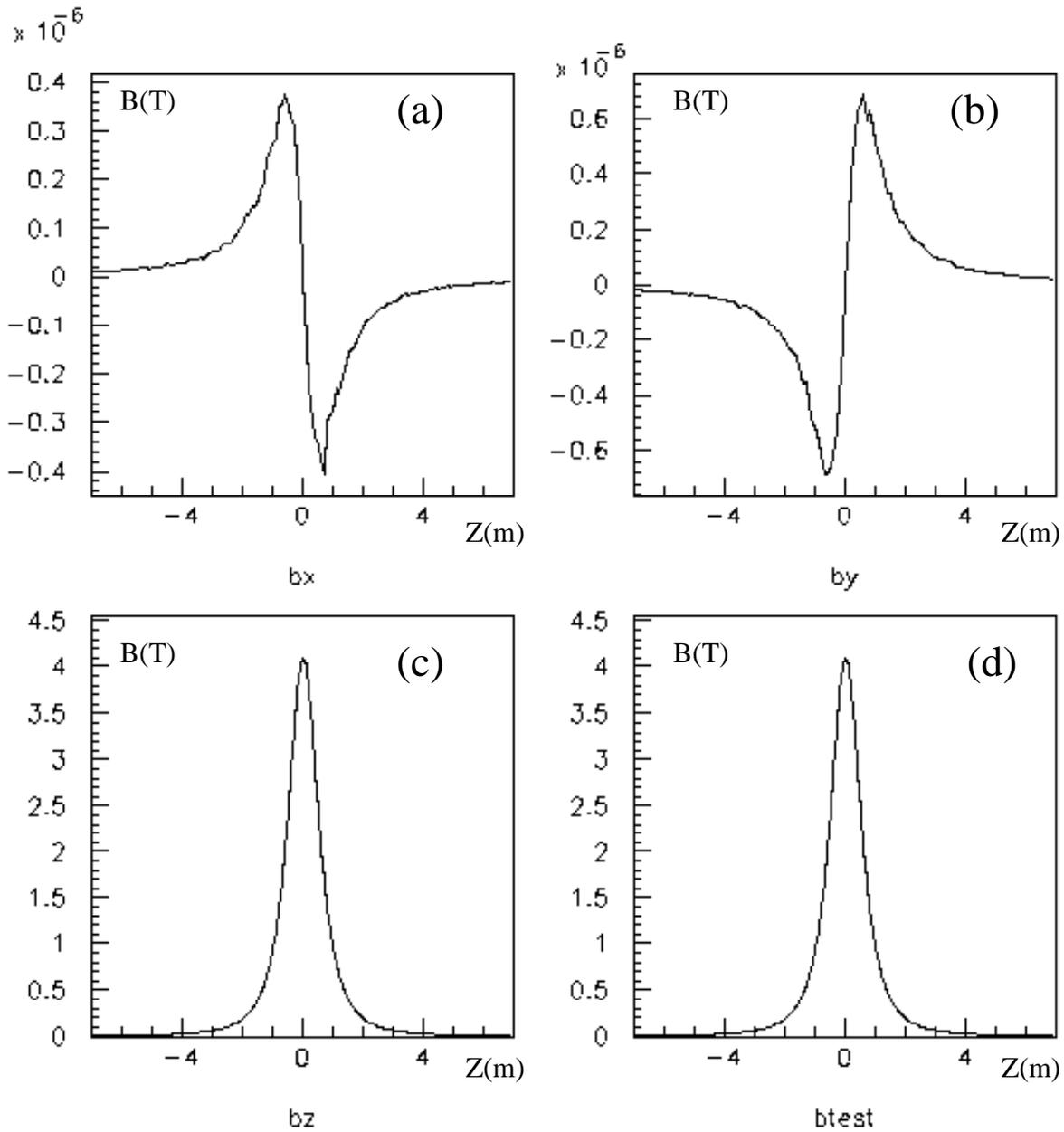


Figure 1: (a) B_x , (b) B_y , (c) B_z Numerical Integration ,
(d) Single Coil $z=0$. exact. $1:10^5$ agreement

RFOFO v_z Z(m) on CenterAxis

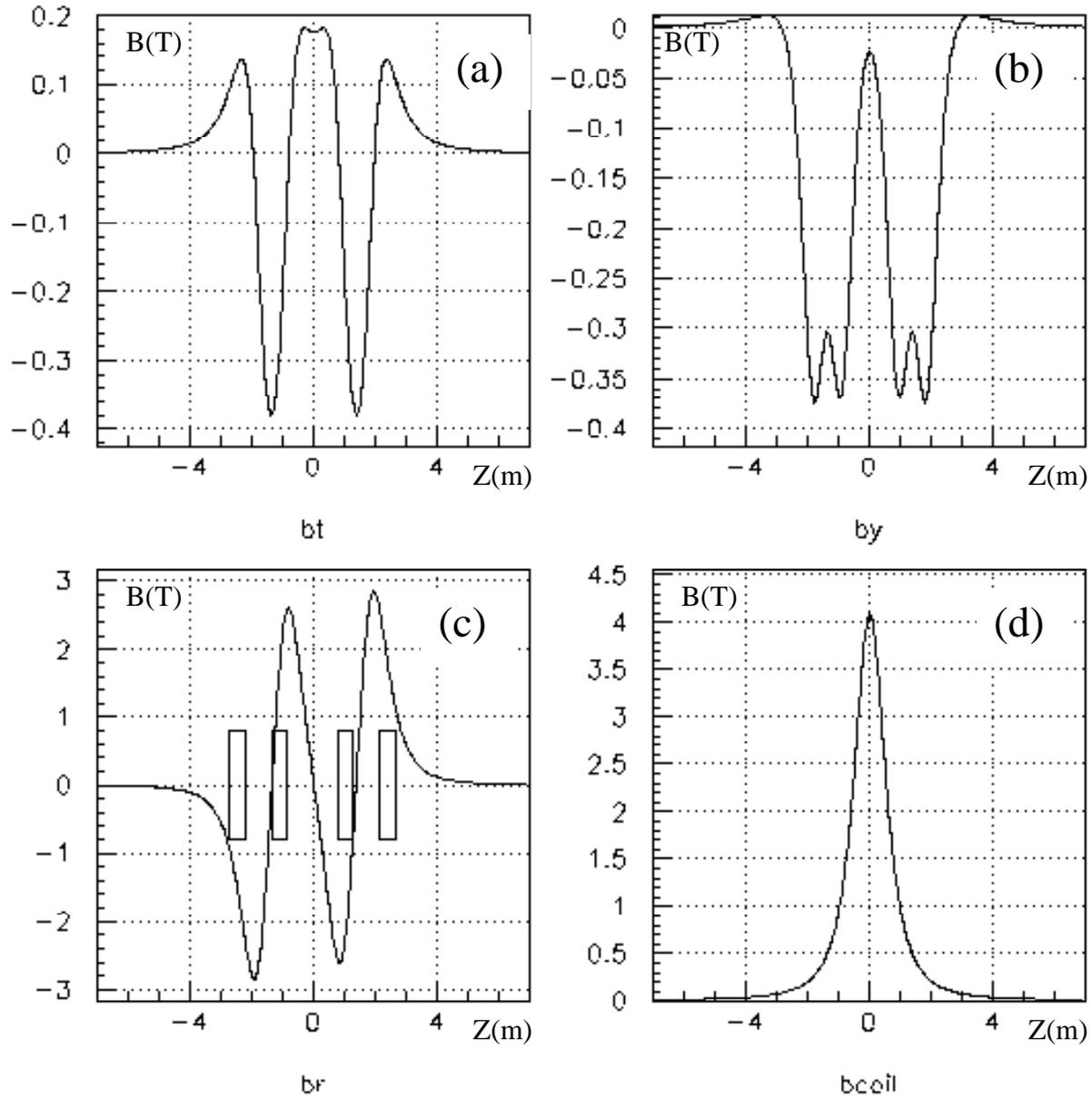


Figure 2: (a) B_t , (b) B_y , (c) B_r Numerical Integration ,
(d) B_z (SingleCoil exact $z=0$.)